

IN THE SPECIFICATION

1. Please amend the second paragraph on page 1, from line 11 thru line 13, as follows:

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The present invention relates to a video signal recording/reproducing apparatus and method, and more particularly to an apparatus and method for controlling copying of a video signal[[,]] when the material ("content") embodied in the signal is copy-protected.

2. Please amend the paragraph bridging pages 1 and 2, from line 15 on page 1 thru line 3 on page 2, as follows:

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To protect copyrights, generally, a video cassette recorder (VCR), which is a video recording/reproducing apparatus, embeds a macrovision signal. This is an automatic gain control (AGC) pulse in an interval between the 12th and the 19th horizontal synchronizing signals of the first field of a composite synchronizing signal and in an interval between the 275th and the 282nd horizontal synchronizing signals of the second field of the composite synchronizing signal, ~~as shown in Figs. 1A and 1B.~~

3. Please amend the paragraphs bridging pages 2 and 3, from line 19 on page 2 thru line 19 on page 3, as follows:

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To solve the above problem, an object of the present invention is to provide an apparatus and method for controlling the copying of a video signal so as to detect whether a recording medium to be copied includes a copy preventing signal (a macrovision signal). Related objects of the invention include preventing illegal copying by not performing in a recording mode when the recording medium includes a copy-preventing signal, and informing a user of such facts.

To achieve the above objects, the present invention provides an apparatus for controlling copying according to the standard of a video signal to be recorded. The apparatus includes: a video signal processor for separating a composite synchronizing signal from the input video signal to be recorded, and for modulating or demodulating the video signal; a detector for receiving the composite synchronizing signal and detecting a copy preventing signal; and a controller for generating a recording prevention control signal to stop a recording mode when a copy-preventing signal is detected by the detector.

The present invention also provides a method for controlling copying according to the standard of a video signal to be recorded. The method includes the steps of: (a) determining whether a copy command is input; (b) comparing a time T_1 read from a timer with a threshold value T_0 set an initial stage when it is determined that the copy command is input in the step (a); (c) determining whether a copy-preventing signal is detected from the video signal to be recorded when it is determined that $T_1 \geq T_0$ in step (b); and (d) stopping a copy mode when it is determined that a copy-preventing

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wml signal is detected from the video signal in step (c).

4. Please amend the paragraph on page 4, on lines 7 and 8, as follows:
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Fig. 2 is a diagram illustrating the configuration of an apparatus for controlling
[[copy]] copying of a video signal according to the present invention;

5. Please amend the paragraph on page 4, on lines 12 and 13, as follows:
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Fig. 5 is a flowchart of a method for controlling ~~copy according to the present~~
~~invention~~ copying in a dual deck VCR according to the present invention.

6. On page 4, please insert the following between lines 14 and 15:
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Figs. 1A and 1B illustrate macrovision signals added to a video signal. As
mentioned above, to protect copyrights, generally, a video cassette recorder (VCR),
which is a video recording/reproducing apparatus, embeds a macrovision signal. This is
an automatic gain control (AGC) pulse in an interval between the 12th and the 19th
horizontal synchronizing signals of the first field of a composite synchronizing signal and
in an interval between the 275th and the 282nd horizontal synchronizing signals of the
second field of the composite synchronizing signal, as shown in Figs. 1A and 1B.

7. Please amend the paragraphs bridging pages 4 and 5, from line 15 on page 4 thru line 1 on page 5, as follows:

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Referring to Fig. 2, an apparatus for controlling [[copy]] copying of a video signal[[.]] includes tuner/modulator (T/M) block 201, audio/video (A/V) switching unit 202, video signal processor 203, detector 204, and controller 205.

T/M block 201 separately outputs the video signal and the audio signal of a channel which is selected by a user from [[among]] broadcast signals input through an RF input terminal or outputs a signal input from a video/audio jack input terminal directly through a line.

8. Please amend paragraphs bridging pages 5 and 6, from line 16 on page 5 thru line 16 on page 6, as follows:

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Controller 205 counts the horizontal synchronizing signals of the composite synchronizing signal to generate a masking pulse for slicing an interval between the 12th and the 19th horizontal synchronizing signals of a first field and an interval between the 275th and the 282nd horizontal synchronizing signals of a second field, on which the macrovision signal is loaded. When the controller 205 receives information that a macrovision signal is detected from the detector 204, it generates a recording prevention control signal for stopping a recording mode and, simultaneously, generates a display

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control signal for displaying an on-screen display message that a tape to be copied is a recording medium protected against illegal copy. A pulse generator unit for generating a masking pulse which is generated by controller 205 above may be included in detector 204. Controller 205 thus acts as a means for generating a recording-prevention control signal adapted to stop a recording of the content embodied in the video signal when the copy preventing signal is detected by the ~~first means~~ detector 204.

A method for controlling ~~[[copy]]~~ copying of a video signal using controller 205 when detector 204 determines that a macrovision signal is included in a video signal is described in detail with reference to Fig. 3. A predetermined threshold value C_{th} for determining whether or not a macrovision signal is included ~~or not~~ in an interval in which a masking pulse is generated is set and stored in a nonvolatile memory (a memory within the detector 204) in step 301. In other words, the threshold C_{th} is set to exceed the number of horizontal synchronizing signals and to be smaller than or equal to the sum of the number of the horizontal synchronizing signals and the number of macrovision signals in an interval in which a masking pulse is generated.

9. Please amend the paragraphs bridging pages 7 and 8, from line 15 on page 7 thru line 8 on page 8, as follows:
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The copyright material can be passively protected from illegal ~~[[copy]]~~ copying by adding a macrovision signal to a video signal as described above. However, dual deck

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VCRs on the market allow even a video signal including a macrovision signal to be normally copied using an FM copy method (which directly records a modulated video signal read from a recording medium to be copied without demodulating the video signal). To prevent illegal ~~[[copy]]~~ copying of a recording medium containing macrovision signals, for example, in the United States, copyrights will be aggressively protected from April 28, 2000.

The following description concerns an embodiment of the invention in an apparatus and method for controlling ~~[[copy]]~~ copying by applying a method of detecting a copy preventing signal to a dual deck VCR according to the present invention ~~to a dual deck VCR~~. Referring to Fig. 4, the dual deck VCR to which the present invention is applied includes video heads 401 and 409, rotary transformers 402 and 408, pre-amplifier 403, video signal processor 404, detector 405, FM copy signal processor 406, recording amplifier 407, controller 410, memory 411, timer 412, servo unit 413, drum motor 414, capstan motor 415, display unit 416 and key input unit 417.

10. Please amend the paragraph on page 8, from line 14 thru line 19, as follows:

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In a normal copy mode, primarily, a recording medium from which material is to be reproduced ~~[[from]]~~ is loaded on the reproducing deck VCR and a recording medium on which the material is to be recorded ~~[[on]]~~ is loaded in the recording deck VCR. Next, once a user enters a copy command using key buttons in key input unit 417, controller

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410 analyzes the input key command and controls the peripheral units such that the reproducing deck VCR performs reproduction and the recording deck VCR performs recording.

11. Please amend the two paragraphs on page 9, from line 10 thru line 16, as follows:
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Next, the output signal of FM signal processor 406 is applied to and amplified by recording amplifier 407 of the recording deck VCR, and is then transmitted to video head 409 via rotary transformer 408 so as to be recorded ~~[[in]]~~ on the recording medium in the recording deck VCR.

A method and apparatus for controlling ~~[[copy]]~~ copying in a dual deck VCR on the basis of a beginning data at which copyright is aggressively protected will be described with reference to Figs. 4 and 5.

12. Please amend the paragraph bridging pages 10 and 11, from line 19 on page 10 thru line 3 on page 11, as follows:
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In step 507, when the copy mode is stopped, characters informing the user that a recording medium to be copied is protected from being illegally copied are displayed through an on-screen display message. In other words, controller 410 controls character

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Am1 signals stored in the memory 411 to be read to display a message informing the user that the recording medium is protected from illegal [[copy]] copying through display unit 416.

13. Please amend the last paragraph on page 11, from line 10 thru line 19, as follows:
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A13 As described above, the present invention stops a copy (or recording) mode and informs a user that a recording medium to be copied is protected from illegal [[copy]] copying when a copy preventing signal is detected from a video signal reproduced from the recording medium to be copied, thereby allowing the user to quickly recognize that the recording medium to be copied includes a copy preventing signal before completing the copy. In addition, when the present invention is applied to a dual deck VCR, the FM copy can be controlled depending on the existence/non-existence of a macrovision signal on the basis of the beginning date on which the aggressive protection of copyright becomes effective, thereby providing convenience to the user and allowing for manufacture of productions without violating copyright laws.
